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| 10/529,040      | 03/24/2005  | Hiromasa Sakai       | 050340-0186         | 6230             |

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| EXAMINER |
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LEWIS, BEN

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| ART UNIT | PAPER NUMBER |
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1795

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01/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/529,040

Applicant(s)

SAKAI, HIROMASA

Examiner

Ben Lewis

Art Unit

1795

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 08 November 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 1 and 4-15.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation sheet  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.


Continuation of 3. NOTE: With respect to claims 9 and 10, the recitation of "wherein the defrosting device is disposed in the water tank and comprise a heat exchanger allowing heat exchange between the coolant from the fuel cell and the ice in the water tank; a heater for heating the coolant discharged from the defrosting device" in claims 9 and 10 are new issues that would require further consideration and search

Claims 7 and 8 are new issues that would require further consideration and search since the scope of the claims previously depending on claim 2 has been changed when claim 2 was combined with the limitations of claim 3 to form the new parent claim 1.

With respect to claim 1. With respect to the defrosting device, Kanai et al. do not specifically teach a defrosting device for melting ice in the water tank by applying heat of the coolant to the water tank. However, Kanai et al. teach that freezing can be prevented by providing an electrical heater (anti-freeze apparatus; not shown in FIG. 15) inside the collected water storage tank 4 (Paragraph 0156). Applying heat of a coolant to the water tank to melt ice and providing an electrical heater inside the water tank to prevent freezing (ice) are functionally equivalent ice melting means. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute coolant heat transfer to the water tank to melt ice with the electrical heaters in the fuel cell system disclosed by Kanai et al (See Final Office Action Issued 8/8/07).

With respect to a heater for heating the coolant discharged from the defrosting device, Kanai et al. teach that anti-freeze heaters (not shown), and sensors T2 and T3 for detecting the temperatures of the reservoir sections of the condenser 126 and the auxiliary water tank 126d respectively, are attached to the condenser 126 and the auxiliary water tank 126d. Based on the results detected by the sensors T2 and T3, the heaters are activated in order to prevent freezing when the temperatures of the reservoir sections "coolant" of the condenser 126 and the auxiliary water tank 126d fall below temperatures near freezing (Paragraph 0239). (See Final Office Action Issued 8/8/07)

With respect to applicant's argument that "the Examiner's assertion that the claimed defrosting device and means are functionally equivalent to the Kanai et al. electric heater is traversed. The electrical heater of Kanai et al. does not suggest the use the claimed defrosting device and means, the heater, and the claimed arrangements of the devices and means, including the necessary coolant recirculation passages." Kanai et al. do not specifically teach a defrosting device for melting ice in the water tank by applying heat of the coolant to the water tank. However, Kanai et al. teach that freezing can be prevented by providing an electrical heater (anti-freeze apparatus; not shown in FIG. 15) inside the collected water storage tank 4 (Paragraph 0156). Applying heat of a coolant to the water tank to melt ice and providing an electrical heater inside the water tank to prevent freezing (ice) are functionally equivalent ice melting means. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute coolant heat transfer to the water tank to melt ice with the electrical heaters in the fuel cell system disclosed by Kanai et al. (See Final Office Action Issued 8/8/07)

  
SUSY TSANG-FOSTER  
SUPERVISORY PATENT EXAMINER